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(54) **DETECTION DEVICE FOR VEHICLE, ABNORMALITY DETECTION METHOD, AND ABNORMALITY DETECTION PROGRAM**

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See application file for complete search history.

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(57) **ABSTRACT**

The present invention relates to a detection device **100** for a vehicle, which can prevent damage to the vehicle by detecting occurrence of abnormality before the vehicle is damaged, and can accurately detect abnormality inside and outside the vehicle. The detection device **100** for a vehicle of the present invention includes: a transmission antenna **1**, installed inside a vehicle **50**, for transmitting a radio wave; reception antennae **2**, **3**, **4**, and **5**, installed inside the vehicle **50**, for receiving the radio wave; and an abnormality detection calculation section **6** that calculates a spatial feature amount P(t) based on the radio wave received by each of the reception antennae **2**, **3**, **4**, and **5**, and detects, based on the calculated spatial feature amount P(t), a motion of a person outside the vehicle **50** and a motion of a person intruding into the vehicle **50**.

17 Claims, 8 Drawing Sheets